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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,215	07/25/2006	Kyoichi Hosokawa	XA-10601	8234
181 7590 08/08/2008 MILES & STOCKBRIDGE PC 1751 PINNACLE DRIVE SUITE 500 MCLEAN, VA 22102-3833			EXAMINER NGUYEN, MATTHEW VAN	
			ART UNIT 2838	PAPER NUMBER
			NOTIFICATION DATE 08/08/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/587,215

Applicant(s)

HOSOKAWA ET AL.

Examiner

MATTHEW V. NGUYEN

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-60 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/25/06 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CIS-300)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 7/25/06

1. This application is in condition for allowance except for the following formal matters:

In drawings, FIGs. 13 and 14 should be labeled as -- PRIOR ART --.

In Specification, [0002], line 7, "Fig. 12" should be changed to -- Fig. 13 --; and

The entry of [0053] including "Brief Explanation of Drawings" should be moved to right before [0009] of "Best Mode for Carrying out of the Invention".

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

2. None of prior art of record taken alone or in combination shows a booster circuit which includes a bootstrap capacity which has one end thereof connected to another end of the inductor and a MOSFET which has a source-drain route thereof connected between another end of the bootstrap capacity and an external power source terminal, and is capable of generating a boosted voltage which is used as an operating voltage of the driving circuit on another end of the bootstrap capacity, the MOSFET being configured to connect another source/drain region and a substrate gate such that a junction diode between one source/drain region and the substrate gate is directed in the direction opposite to the direction toward the external power source terminal from other end of the bootstrap capacity, and prevents the flow of the current toward the external

power source terminal from another end of the bootstrap capacity by the junction diode when the boosted voltage is generated by allowing the MOSFET to assume an OFF state in response to the PWM signal (as recited in claims 27-40); or

a MOSFET which has a source-drain route thereof connected between an external power source terminal and the second terminal, the MOSFET being configured to connect another source/drain region and a substrate gate such that a junction diode between one source/drain region and the substrate gate is directed in the direction opposite to the direction toward the external power source terminal from other end of the bootstrap capacity, and prevents the flow of the current toward the external power source terminal from another end of the bootstrap capacity by the junction diode when the boosted voltage is generated by allowing the MOSFET to assume an OFF state (as recited in claims 41-52); or

a MOSFET which connects a source-drain route thereof connected between another end of the second capacity and an external power source terminal, wherein a booster circuit for generating a boosted voltage which forms a power source voltage used by the driving circuit is constituted of the second capacity and the MOSFET, and the MOSFET is configured to connect another source/drain region and a substrate gate such that a junction diode between one source/drain region and the substrate gate is directed in the direction opposite to the direction toward the external power source terminal from another end of the second capacity (as recited in claims 53-56); or

a third MOSFET which is configured such that a source-drain route thereof is connected between an external power source terminal and another end of a first

Art Unit: 2838

capacity which has one end thereof connected to the output terminal, wherein the first capacity and the third MOSFET form a booster circuit which generates a boosted voltage for driving the first MOSFET, and the third MOSFET is configured to connect another source/drain region and a substrate gate such that a junction diode between one source/drain region and the substrate gate is directed in the direction opposite to the direction toward the external power source terminal from another end of the first capacity (as recited in claims 53-60).

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW V. NGUYEN whose telephone number is (571)272-2081. The examiner can normally be reached on 8 HOURS M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AKM ULLAH can be reached on (571)272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MATTHEW V NGUYEN/
Primary Examiner, Art Unit 2838